

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Original): A system comprising:

a housing configured to receive a removable component;
an assembly coupled with the housing, the assembly including a pin; and
a rotatable drive shaft coupled with the removable component to engage the assembly,
wherein the drive shaft includes a first helical groove to receive the pin and guide the pin along
the shaft.

Claim 2 (Original): The system of claim 1 further including a handle coupled with the
removable component, wherein rotation of the handle drives the shaft relative to the pin to move
the removable component relative to the housing.

Claim 3 (Original): The system of claim 1, wherein the drive shaft further comprises a first
helical groove entry having a width greater than a width of the first helical groove, wherein at
least a portion of the first helical groove entry is defined by a first inclined entry guide.

Claim 4 (Original): The system of claim 3, wherein the first inclined entry guide includes a
first groove point disposed at a first end of the first inclined entry guide.

Claim 5 (Original): The system of claim 3, further comprising a transition portion disposed
between the first inclined entry guide and the first helical groove.

Claim 6 (Currently Amended): The system of claim 1, ~~further comprising:~~
 wherein the drive shaft includes a second helical groove; and having a second helical
groove entry including a second groove point, wherein at least a portion of the second helical
groove entry is defined by a second inclined entry guide.

Claim 7 (Original): The system of claim 1, further comprising a first detent forming a terminus
of the first helical groove and configured to receive the pin.

Claim 8 (Original): The system of claim 7, further comprising a compression spring arranged
so that as the pin travels along a portion of the first helical groove the compression spring is
compressed and causes the pin to enter the first detent.

Claim 9 (Original): The system of claim 1, wherein the removable component is a printed
circuit board and the printed circuit board is fully inserted and extracted through rotation of the
drive shaft.

Claim 10 (Original): The system of claim 1, further comprising a locking device configured to
prevent rotation of the handle relative to the removable device when the locking device is
engaged.

Claim 11 (Original): The system of claim 10, wherein the locking device further comprises:
 a threaded member disposed within the handle; and
 a threaded connector disposed within a housing coupled with the removable component.

Claim 12 (Withdrawn): A device for inserting and extracting a removable component comprising:

a drive shaft having a proximal end and a distal end with a first helical groove disposed along the distal end, wherein the first helical groove includes a first enlarged entry;

a handle coupled to the proximal end of the drive shaft; and

a receptacle assembly having a first throughbore and a pin disposed within the throughbore, wherein the throughbore receives the distal end of the drive shaft and the drive shaft aligns the pin with the first helical groove so that rotation of the handle causes rotation of the drive shaft which causes the pin to travel along the first helical groove, wherein rotation of the drive shaft in a first direction causes the proximal end to move towards the receptacle assembly and rotation in a second direction causes the proximal end to move away from the receptacle assembly.

Claim 13 (Withdrawn): The device of claim 12, further comprising a housing having a throughbore, wherein the proximal end of the drive shaft passes through the throughbore to couple with the handle.

Claim 14 (Withdrawn): The device of claim 13, wherein the housing is coupleable to a first object and the receptacle assembly is coupleable to a second object so that when the pin is engaged with the helical groove rotation of the drive shaft in the first direction causes the first object to move towards the second object and rotation of the drive shaft in the second direction causes the first object to move away the second object.

Claim 15 (Withdrawn): The device of claim 14, wherein the first object is a printed circuit board.

Claim 16 (Withdrawn): The device of claim 13, further comprising:
a spring surrounding a portion of the drive shaft within the housing; and
a detent located at a terminus of the first helical groove to receive the pin, wherein
rotation of the drive shaft in the first direction compresses the spring and guides the pin to enter
the detent.

Claim 17 (Withdrawn): The device of claim 12, wherein the first enlarged entry includes a
first inclined entry guide.

Claim 18 (Withdrawn): The device of claim 17, wherein the first enlarged entry includes a
second inclined entry guide, and further wherein the first inclined entry guide and the second
inclined entry guide taper toward one another.

Claim 19 (Withdrawn): The device of claim 18, wherein the first inclined entry guide and
the second inclined entry guide are formed from a first groove point and a second groove point.

Claim 20 (Withdrawn): The device of claim 18, further comprising a second helical groove
having a second enlarged entry.

Claim 21 (Withdrawn): The device of claim 20, wherein the second enlarged entry includes
a third inclined entry guide.

Claim 22 (Withdrawn): The device of claim 21, wherein the second enlarged entry includes
a fourth inclined entry guide, and further wherein the third inclined entry guide and the fourth
inclined entry guide taper toward one another.

Claim 23 (Withdrawn): The device of claim 22, wherein the third inclined entry guide and
the fourth inclined entry guide are formed from the first groove point and the second groove
point.

Claim 24 (Withdrawn): The device of claim 12, further comprising:
 a locking member located within the handle; and
 a locking mechanism configured to receive the locking member and prevent rotation of
the handle.

Claim 25 (Withdrawn): The device of claim 24, wherein the locking mechanism is a
threaded member and the locking mechanism is a threaded connector.

Claim 26 (Withdrawn): A method comprising:
 inserting a first tip of a first drive shaft attached to a first number into a first receptacle
assembly attached to a second number so that a first helical groove on the first drive shaft aligns
with a first pin located within the first receptacle assembly; and
 rotating a first handle coupled with the first drive shaft in a first direction to rotate the
first drive shaft and thereby move first number toward the second number.

Claim 27 (Withdrawn): The method of claim 26, further comprising rotating the first
handle in a second direction to extract the printed circuit board from the system board.

Claim 28 (Withdrawn): The method of claim 26, further comprising securing the first
handle relative to the first receptacle assembly to prevent rotation of the handle.

Claim 29 (Withdrawn): The method of claim 26, further comprising:
 inserting a second tip of a second drive shaft attached to the first number into a second
receptacle assembly attached to the second number so that a second helical groove on the second
drive shaft automatically aligns with a second pin located within the second receptacle assembly;
and
 rotating a second handle coupled with the second drive shaft in a first direction to rotate
the second drive shaft and thereby move the first number toward the second number circuit board
into the system board.

Claim 30 (Withdrawn): The method of claim 26, wherein a single rotation of the first handle fully seats the first number against the second number.

Claim 31 (Withdrawn): A device for inserting and extracting a first object into a second object comprising:

 means for automatically aligning a drive shaft having a helical groove with a fixed receptacle assembly; and

 means for moving the first object along a linear path due to rotation of the drive shaft.

Claim 32 (Withdrawn): The device of claim 31, further comprising means for indicating that the drive shaft has fully entered the receptacle assembly.

Claim 33 (Withdrawn): The device of claim 31, further comprising means for securing a handle coupled with the drive shaft relative to the receptacle assembly.

Claim 34 (New): The system of claim 1, wherein

 the housing comprises a housing for an electrical device and the removable component comprises a printed circuit board,

 the rotatable drive shaft is mounted to the printed circuit board for assisting in the insertion and extraction of printed circuit board from the electrical device, and

 the assembly is mounted to the housing of the electrical device to engage the drive shaft and urge the printed circuit board linearly into the network device.

Claim 35 (New): The system of claim 34, wherein

the drive shaft has a proximal end having a handle for rotation of the drive shaft and a distal end along which the first helical groove is disposed,

rotation of the drive shaft in a first direction causes the proximal end to move toward the assembly to urge the printed circuit board linearly into the electrical device, and

rotation of the drive shaft in a second direction causes the proximal end to move away from the assembly to urge the printed circuit board linearly away from the electrical device.

Claim 36 (New): The system of claim 35, wherein

the assembly coupled to the housing includes a first throughbore and the pin of the assembly is disposed within the throughbore, and

the throughbore receives the distal end of the drive shaft coupled to the printed circuit board, and aligns the pin with the first helical groove of the drive shaft so that rotation of the handle causes rotation of the drive shaft and urges the pin to travel along the first helical groove.